

What is claimed is:

1. An electromagnetic relay comprising:

a coil; and

a contact group containing a plurality of normally open contacts which are connected in series under control of an electromagnet created when said coil is energized.

2. An electromagnetic relay comprising:

a coil;

a normally closed contact;

a plurality of movable contacts including a movable contact which is connected to said normally closed contact when said coil is not energized;

a plurality of normally open contacts disposed in correspondence with said plurality of movable contacts; and

an armature operated under control of an electromagnet created when said coil is energized, to thereby simultaneously displace said plurality of movable contacts so that said plurality of movable contacts are connected to said plurality of normally open contacts.

3. An electromagnetic relay according to claim 2, wherein

said plurality of normally open contacts are electrically connected in common within a housing, said plurality of movable contacts respectively come in contact with said plurality of normally open contacts to permit said plurality of normally open contacts to be electrically connected in series and no terminal is led out from said commonly connected normally open contacts to the outside of said housing.

4. An electromagnetic relay according to claim 2, wherein said plurality of normally open contacts are electrically connected in common by electrically connecting terminals led out to the outside of said housing and said plurality of movable contacts are respectively brought in contact with said plurality of normally open contacts so that said plurality of normally open contacts are electrically connected in series.

5. An electromagnetic relay according to claim 3, wherein said plurality of normally open contacts are integrally formed with a common normally open contact member.

6. An electromagnetic relay according to claim 2, wherein said armature includes an armature card-like member which simultaneously displaces a plurality of movable contact spring members

with respective movable contacts of said plurality of movable contacts formed thereon under control of an electromagnet created when said coil is energized.

7. An electromagnetic relay according to claim 2, wherein said armature includes a plate-like member made of a magnetic material commonly fixed to a plurality of movable contact spring members with respective movable contacts of said plurality of movable contacts provided thereon and said plate-like member is attracted by a magnetic attraction from an electromagnet created when said coil is energized so that said plurality of movable contacts are simultaneously connected to said plurality of normally open contacts.

8. An electromagnetic relay having a housing which houses therein:

a first relay section including a first coil and a first contact group containing a plurality of normally open contacts which are connected in series under control of an electromagnet created when said first coil is energized; and

a second relay section including a second coil and a second contact group containing a plurality of normally open contacts which are connected in series under control of an electromagnet created when said second coil is energized.

9. An electromagnetic relay in which first and second relay sections are provided within a housing, each of said first and second relay sections comprising:

a coil;

a normally closed contact;

a plurality of movable contacts containing a movable contact which is connected to said normally closed contact when said coil is not energized;

a plurality of normally open contacts provided in correspondence with said plurality of movable contacts; and

an armature operated under control of an electromagnet created when said coil is energized, to thereby simultaneously displace said plurality of movable contacts so that said plurality of movable contacts are connected to said plurality of normally open contacts.

10. An electromagnetic relay according to claim 9, wherein said plurality of normally open contacts of said first and second relay sections are electrically connected in common within a housing, said plurality of movable contacts of said first and second relay sections respectively come in contact with said plurality of normally open contacts to permit said plurality of normally open contacts to be

electrically connected in series and no terminal is led out from said plurality of commonly connected normally open contacts to the outside of said housing.

11. An electromagnetic relay according to claim 9, wherein said plurality of normally open contacts of said first and second relay sections are electrically connected in common by electrically connecting terminals led out to the outside of said housing and said plurality of movable contacts of said first and second relay sections are respectively brought in contact with said plurality of normally open contacts so that said plurality of normally open contacts are electrically connected in series.

12. An electromagnetic relay according to claim 10, wherein said plurality of normally open contacts of said first relay section and said plurality of normally open contacts of said second relay section are integrally formed with a common normally open contact member.

13. An electromagnetic relay according to claim 9, wherein each of said armatures of said first and second relay sections includes an armature card-like member which simultaneously displaces a plurality of movable contact spring members with respective movable

contacts of said plurality of movable contacts formed thereon under control of electromagnets created when said first and second coils are energized.

14. An electromagnetic relay according to claim 9, wherein each of said armatures of said first and second relay sections includes a plate-like member made of a magnetic material commonly fixed to a plurality of movable contact spring members with respective movable contacts of said plurality of movable contacts provided thereon and said plate-like member is attracted by a magnetic attraction from electromagnets created when said first and second coils are energized so that said plurality of movable contacts are simultaneously connected to said plurality of normally open contacts.

15. An electromagnetic relay according to claim 9, wherein said normally closed contacts of said first and second relay sections are connected to each other within said housing and said normally closed contact terminals led out to the outside of said housing are integrally formed as a common normally closed contact terminal.

16. An electromagnetic relay according to claim 9, wherein said plurality of movable contacts of said first and second relay sections and which are not connected to said normally closed contacts

are integrally formed as a common movable contact and said common movable contact is operated by any of said armatures of said first and second relay sections

17. An electromagnetic relay comprising:

two coils; and

more than three contact groups, wherein said more than three contact groups are comprised of contact groups independently operated by one of said two coils and contact groups commonly operated by any of said two coils.

18. An electromagnetic relay comprising:

more than three coils; and

a plurality of contact groups the number of which is equal to that of said coils, wherein each of contact groups operated by two coils of said more than three coils is comprised of a normally closed contact, a movable contact and a normally open contact, said contact group driven by other coil than said two coils of said more than three coils is comprised of a movable contact and a normally open contact, all normally open contacts of said plurality of contact groups are connected to each other within a housing and no terminal is led out from said normally open contacts to the outside of said housing.

19. An electromagnetic relay according to claim 18,
wherein said normally closed contact terminals of contact groups driven
by said two coils are connected to each other within a housing and said
normally closed contact terminals led out to the outside of said housing
are integrally formed as a common normally closed contact terminal.